ADJUSTMENT TO PERMANENT JOB LOSS IN BRITISH COLUMBIA: EVIDENCE FROM THE DISPLACED WORKER SURVEY

Prepared by

W. Craig Riddell

First Draft: December 1990

Revised: May 1991

I thank Bosiljka Kruyt for secretarial assistance, Tim Sargent for research assistance and Dr. Kenneth Strand and members of the Task Force for comments on an earlier version of this paper.

BC
T15L66
C
T4 N4
197
F3

Adjustment to Permanent Job Loss in British Columbia: Evidence from the Displaced Worker Survey

During the first half of the 1980s a large number of Canadian workers suffered permanent job loss. Indeed, the number of individuals who lost their jobs during this period was probably unprecedented in the post World War Two era. These permanent displacements reflected both the 1982-83 recession and various longer term structural changes in the economy.

In order to provide information on the behavior of workers so affected, Employment and Immigration Canada sponsored the Displaced Worker Survey (DWS), carried out in January 1986 as a supplement to the monthly Labour Force Survey (LFS). The DWS focussed on those individuals who had permanently lost one or more jobs during the previous five years (January 1981 to December 1985 inclusive). Because the survey was carried out as a supplement to the LFS, the DWS is representative of the Canadian population. In this section we utilize the DWS to examine such issues as which workers were most affected by permanent job loss, the time taken to become re-employed, the wage loss (or gain) due to displacement, and the use of such factors as unemployment insurance, regional mobility and training in adjusting to job displacement.

The survey defined permanent job loss as one of the following:

(i) being laid off from a job from which the individual was not recalled;
(ii) having lost or left a job because the employer went out of business;
(iii) having lost or left a job because of a plant closing or moving.

Individuals who responded that they met one or more of these criteria are referred to as displaced workers The analysis which follows is restricted to individuals displaced from jobs in which they were "paid workers"; i.e., not self-employed or unpaid family workers.

Table 1 shows, for Canada and British Columbia, the number of displaced workers and various important sub-categories such as those displaced from full-time jobs, those displaced from jobs at which the individual had worked for more than three or more years, etc. For Canada as a whole, almost 1.6 million workers -- or over 14 percent of the number of employed workers in October 1981 -- experienced permanent job loss during this period. (October 1981 is used as a base reference point because this is the month in the beginning year of the sample with the least seasonal influence.) In B.C., the number of workers

displaced during 1981-85 was over 19 percent of those employed in Oct. 1981. Over 80 percent of these workers lost full time jobs (88 percent for Canada as a whole) and almost 40 percent lost jobs at which they had been employed three or more years.

As the statistics in Table 1 indicate, workers in B.C. experienced a higher incidence of displacement than was the case for Canada as a whole. Overall, the amount of displacement was about one-third higher (19.4% vs. 14.4%). The extent of jobs loss was higher in each of the categories in Table 1, with displacement from full-time jobs and jobs with tenure of 3 or more years each being about 25 percent higher in B.C. than in Canada as a whole.

Table 2 shows the time pattern of job loss for Canada and B.C. Apart from the data for 1985, the time pattern is as expected. The lowest amount of job loss occurred in 1981, prior to the recession. The incidence of job loss increased substantially in 1982 and somewhat further in 1983, then fell in 1984 as the economy recovered. This pattern was observed in both B.C. and all of Canada, although the peak in 1983 was more pronounced in B.C.

Two features of the time pattern deserve comment. One is that the amount of displacement remained high as the economy recovered, suggesting that non-cyclical factors are

important in permanent job loss. Indeed, for Canada the amount of displacement was approximately constant over the three years 1982-84. For B.C., as previously noted, the time pattern showed a closer relationship to cyclical factors. The second and related observation is that the largest amount of displacement occurred in 1985. Because of the strong economic growth that occurred during 1985, this finding -- which holds for both B.C. and all of Canada -- is surprising. To some extent it may reflect the nature of the survey rather than actual behavior. Because 1985 is the final year of the sample, some individuals laid off during 1985 may be recalled in 1986. That is, there may be some individuals measured as displaced during 1985 who would not be so measured if the survey were carried out a year later.

Another potential explanation is recall bias. There is a documented tendency for survey respondents to be somewhat more likely to recall bouts of unemployment -- especially brief spells -- that occurred recently. One of the dangers of the DWS survey design -- which asks about the previous five years -- is that recall bias will affect the early part of the retrospective period more than the latter part.

Because of these two factors, the amount of displacement occurring in 1985 may be overstated relative to 1981-84. Nonetheless, even after some adjustment for this overstatement, it is clear that a very significant amount of

permanent job loss continued to occur in B.C. and Canada as the economy recovered from the 1982-83 recession.

Table 3 shows how each of the provinces was affected by job displacement during 1981-85. B.C. and Newfoundland had the greatest proportion of their labour forces affected, followed by Quebec and Alberta. The incidence of displacement in the provinces most affected was about double that in the provinces least affected (P.E.I., Saskatchewan and Ontario).

The duration of non-employment following displacement is a key indicator of the ease with which workers adjusted to job loss. This statistic is defined as the length of time between displacement and the first job after displacement; accordingly it is only measured for those workers who in fact found a new job. By this measure, B.C. workers adjusted somewhat less quickly than the Canadian average (28.9 weeks in B.C. versus 26.8 weeks in Canada). Relative to B.C., adjustment occurred more quickly in Alberta, Saskatchewan, Manitoba and Ontario and more slowly in Quebec and the Maritime provinces. However, it should be recognized that B.C.'s slower than average adjustment in part reflects the fact that the B.C. labour market was more depressed than that of most other provinces by the 1982-83 recession. Nonetheless, adjustment in B.C. was

substantially slower than in Alberta, another province hit hard by the recession.

The percentage change in earnings following displacement also varied considerably across provinces (Table 3). There were large declines in earnings in Alberta and Saskatchewan and smaller losses in Newfoundland, P.E.I., Manitoba, and B.C. The apparent willingness of workers in Alberta and Saskatchewan to accept lower paying jobs may have been a factor contributing to the short periods of unemployment experienced by displaced workers in those two provinces.

The earnings measure here is normal weekly earnings; thus a reduction in earnings could be due to taking a job at a lower hourly wage rate or with fewer normal hours per week (or both). On average the change in weekly earnings between the pre - and post-displacement jobs was approximately zero, and in Nova Scotia and New Brunswick there were even substantial earnings gains. As was the case with the length of time without work following displacement, the change in earnings is only observed for the subset of workers who found a new job.

The final column in Table 3 shows the proportions of displaced workers who received unemployment insurance. There is a noticeable difference in this respect between the

provinces east of Ontario (Quebec and the Maritimes) and the remaining provinces. The provinces with the lowest UI take-up (Alberta and Saskatchewan) are also the provinces with the largest wage adjustment and the shortest duration of non-employment following displacement.

The length of time taken to find a new job is one valuable indicator of the adjustment behavior of workers faced with permanent job loss. However, individuals may not remain in the first job following displacement. Thus, another useful indicator of adaptability is the current labour force status of workers who experienced permanent job loss. If these workers adjust easily, many of them will be re-employed by the survey date, especially those displaced more than (say) a year ago. In addition, their unemployment rate should have returned to its normal level for workers with those demographic characteristics (age, gender, education, etc.).

Table 4 provides evidence indicating that workers who suffered permanent job loss did not adjust easily. Furthermore, the adjustment experience in B.C. was significantly worse than the Canadian average. The top part, Table 4(a), shows the current labour force status of workers displaced from full-time jobs more than one year prior to the survey date (January 1986). For Canada only 63 percent of these individuals were re-employed and 21 percent

of those displaced were currently searching for work. Their unemployment rate was 25 percent, more than twice that of the labour force as a whole in January 1986. The B.C. experience was noticeably worse, with only 55 percent of those displaced being employed in January 1986 and 27 percent searching for work. The unemployment rate of this group was over 32 percent compared to an unemployment rate of 12.7 percent in B.C. in January 1986. In terms of the current labour force status of displaced workers, B.C.'s experience was similar to that of Quebec, better than the Maritime provinces, but substantially worse than the provinces of Ontario, Manitoba, Saskatchewan and Alberta.

The bottom part, Table 4(b), provides further information on the current labour force status of workers displaced in B.C. during the entire five year period 1981-85. Less than half of these individuals were employed at the survey date; this was also true of workers displaced from full-time jobs and of workers displaced from jobs at which they had worked for 3 or more years -- two groups which had indicated from their previous behavior a strong labour force attachment. Over one third of the displaced workers were seeking work at the survey date and their unemployment rate was over 40 percent. The unemployment rate was approximately the same for workers displaced from full-time jobs and from jobs with 3 or more years of job tenure.

Table 5 provides evidence on the adjustment methods used by displaced workers. There was more evidence of regional mobility and participation in training by B.C. workers who suffered permanent job loss than for Canada as a whole. For example, 15.9 percent of B.C.'s displaced workers moved to look for or accept a job (versus 13.3 percent for Canada as a whole) and 10.9 percent participated in full-time training (versus 8.6 percent for Canada). Workers displaced in Saskatchewan and Alberta showed the greatest tendency to move to search for or accept work, while workers displaced in B.C. and Alberta showed the greatest tendency to participate in full-time training.

The remainder of the paper examines the adjustment behavior of different types of displaced workers in B.C. The relationship between the consequences of displacement and level of education, industry and occupation are analysed in turn.

Table 6 provides the analysis by level of worker education. The workers most likely to be displaced were those with some post secondary education (probability of 31 percent) while those with university education were least likely to suffer permanent job loss (probability of 12 percent). The remaining groups faced similar likelihoods of displacement (about 20 percent).

There is a clear tendency for workers with less education to adjust less well to job loss. Duration of joblessness following displacement falls steadily with increased education, the likelihood of being employed at the survey date rises with education, and the likelihood of being unemployed or out of the labour force falls with increased education. The difference in outcomes are large. The unemployment rate at the survey date among displaced workers with none or elementary school education is about 70 percent versus less than 30 percent for those with post secondary or university education. The duration of joblessness following displacement among those with low levels of education (none or elementary school) was more than double that among those with university education.

Table 7 shows how workers in different industries adjusted to permanent job loss. The incidence of displacement varied substantially across industries, with the probability of job loss being very low in public administration and finance, insurance and real estate and very high in construction. In most other industries, including private sector services such as trade and services, workers faced a probability of displacement of 20 to 30 percent. The adjustment behavior -- as measured by duration of joblessness and labour force status at the survey date -- varies somewhat across industries but not in any clear systematic fashion.

Table 8 provides breakdowns by occupation of the lost job. Differences in incidence of job loss across occupations are less than across industries, with managerial and administration and professional occupations being least likely to suffer job loss and construction and agriculture, forestry and fishing being most likely. The adjustment behavior of different occupations also varies but the differences are less pronounced than those by industry.

The final table shows the extent to which workers changed industry (Table 9(a)) or occupation (Table 9(b)) following displacement. For this purpose we compare the industry or occupation of the lost job to the current (as of survey date) industry or occupation. Because many of the displaced workers were not employed at the survey date, these are shown as a separate column in Table 9. On average, 25 percent changed industry or occupation, 25 percent stayed in the same industry or occupation and 50 percent were not employed at the survey date. Movement out of the industry was proportionally highest in finance, insurance and real estate and public administration and lowest in agriculture. Movement out of the occupation was highest in managerial and administrative and materials handling. In all industries and occupations a remarkably high proportion of displaced workers were not employed at the survey date.

A number of conclusions appear to emerge from this examination of the experience of workers permanently displaced in British Columbia and Canada during the 1981-85 period. British Columbia's labour force was one of the most significantly affected by permanent job loss -- a reflection of the severity of the recession and of the structural changes occurring in B.C.'s labour market during the early 1980s. B.C. workers who suffered permanent job loss displayed more use of adjustment mechanisms such as training, wage flexibility, and regional mobility than was the case for Canada as a whole. Nonetheless, the labour market outcomes experienced by these individuals -- as measured by the length of time taken to find a new job following displacement and by their current labour force status -- were less satisfactory than for Canada as a whole. To some extent this slower-than-average adjustment can be attributed to the large amount of displacement that occurred in B.C. Nonetheless, the experience in Alberta -- a province which suffered a similar amount of displacement -- was significantly better than that of B.C.

A very strong relationship was found between a worker's level of education and the difficulty with which workers adjusted to permanent job loss. Individuals with less education experienced much longer spells of unemployment following displacement and were much less likely to be employed at the survey date.

TABLE 1

(a) DISPLACED WORKERS IN CANADA 1981-85

CHARACTERISTICS OF WORKERS	NUMBER OF DISPLACED WORKERS (THOUSANDS)	PERCENTAGE OF ALL DISPLACED WORKERS	PERCENTAGE OF ALL EMPLOYED WORKERS IN OCTOBER 1981
ALL	1588	100.0	14.4
ALL DISPLACED IN 1981-84	1144	72.1	10.4
DISPLACED FROM FULL-TIME JOBS	1392	87.7	12.6
DISPLACED FROM JOBS WITH JOB TENURE OF ONE YEAR OR MORE	1107	69.7	10.1
DISPLACED FROM JOBS WITH JOB TENURE OF 3 YEARS OR MORE	632	39.8	5.7

(b) DISPLACED WORKERS IN BRITISH COLUMBIA 1981-85.

CHARACTERISTICS OF WORKERS	NUMBER OF DISPLACED WORKERS (THOUSANDS)	PERCENTAGE OF ALL DISPLACED WORKERS	PERCENTAGE OF ALL EMPLOYED WORKERS IN OCTOBER 1981
ALL	244	100.0	19.4
ALL DISPLACED IN 1981-84	178	73.0	14.2
DISPLACED FROM FULL-TIME JOBS	199	81.5	15.8
DISPLACED FROM JOBS WITH JOB TENURE OF ONE YEAR OR MORE	170	69.9	13.6
DISPLACED FROM JOBS WITH JOB TENURE OF 3 YEARS OR MORE	90	37.0	7.2

SOURCE: Tabulations by the author from the Displaced Worker Survey micro data tape.

TABLE 2

(a) DISPLACEMENT BY YEAR, CANADA

YEAR OF JOB LOSS	TOTAL	DISPLACED FROM FULL-TIME JOBS	DISPLACED FROM JOBS WITH JOB TENURE OF 3 YEARS OR MORE
1981	209,607 (13.2)	188,245 (13.5)	86,328 (13.7)
1982	312,980 (19.7)	284,514 (20.4)	126,783 (20.0)
1983	316,188 (19.9)	281,471 (20.2)	132,575 (21.0)
1984	305,674 (19.3)	266,409 (19.1)	122,052 (19.3)
1985	443,352 (27.9)	371,149 (26.7)	164,607 (26.0)
ALL YEARS	1,587,801 (100.0)	1,391,788 (100.0)	632,345 (100.0)

(b) DISPLACEMENT BY YEAR, BRITISH COLUMBIA

YEAR OF JOB LOSS	TOTAL	DISPLACED FROM FULL-TIME JOBS	DISPLACED FROM JOBS WITH JOB TENURE OF 3 YEARS OR MORE
1981	27,855 (11.4)	23,913 (12.0)	8,927 (9.9)
1982	48,313 (19.8)	43,761 (22.0)	16,824 (18.7)
1983	58,171 (23.9)	48,025 (24.2)	22,116 (24.5)
1984	43,763 (18.0)	35,269 (17.8)	19,145 (21.2)
1985	65,727 (27.0)	47,638 (24.0)	23,162 (25.7)
ALL YEARS	243,829 (100.0)	198,606 (100.0)	90,174 (100.0)

SOURCE: Tabulations by the author from the Displaced Worker Survey micro data tape.

TABLE 3

JOB DISPLACEMENT 1981-85 AND ITS EFFECTS, CANADA AND PROVINCES

PROVINCE	PROPORTION OF EMPLOYED LABOUR FORCE AFFECTED	AVERAGE LENGTH OF TIME WITHOUT WORK FOLLOWING DISPLACEMENT (WEEKS)	PERCENTAGE CHANGE IN EARNINGS FOLLOWING DISPLACEMENT	PERCENT OF DISPLACED WHO RECEIVED U.I.
NEWFOUNDLAND	21.3	38.5	-2.8	85
PEI	8.8	30.2	-2.4	82
NOVA SCOTIA	13.1	30.2	9.5	78
NEW BRUNSWICK	14.5	31.6	9.2	82
QUEBEC	17.2	30.0	2.2	81
ONTARIO	10.6	24.6	1.4	73
MANITOBA	11.5	24.0	-2.2	71
SASKATCHEWAN	9.9	19.7	-3.3	67
ALBERTA	16.2	22.1	-5.9	69
BRITISH COLUMBIA	18.4	28.9	-2.3	73
CANADA	14.0	26.8	0.1	75

SOURCE: Tabulations by the author from the Displaced Worker Survey micro data tape.

TABLE 4

(a) Current Labour Force Status of Workers Displaced from Full-Time Jobs, 1981-84, Canada and Provinces

Province	Percent employed	Percent unemployed	Percent out of labour force	Current unemployment rate
Newfoundland and PEI	36.5	31.7	31.8	46.5
Nova Scotia	53.5	31.1	15.4	36.8
New Brunswick	44.8	32.1	23.1	41.7
Quebec	53.6	25.5	20.9	32.2
Ontario	73.8	14.1	12.1	16.0
Manitoba	71.0	14.8	14.2	17.2
Saskatchewan	70.4	18.1	11.5	20.5
Alberta	73.8	15.2	10.9	17.1
British Columbia	55.2	26.8	18.0	32.6
Canada	62.9	20.9	16.2	24.9

(b) Current Labour Force Status of Workers Displaced in British Columbia, 1981-85

Characteristics of displaced workers	Percent employed	Percent unemployed	Percent out of labour force	Current unemployment rate
All displaced workers	48.2	34.4	17.5	41.6
Workers displaced from full-time jobs	49.2	34.2	16.6	41.0
Workers displaced from jobs with 3 or more years of job tenure	47.1	33.5	19.4	41.6

Source: Tabulations by the author from the Displaced Worker Survey micro data tape.

TABLE 5

MOBILITY AND TRAINING AMONG DISPLACED WORKERS, CANADA AND PROVINCES

PROVINCE	NUMBER OF DISPLACED WORKERS	MOVED TO LOOK FOR OR ACCEPT A JOB	MOVED 100 MILES OR MORE	MOVED TO ANOTHER PROVINCE	PARTICIPATED IN FULL-TIME TRAINING
NEWFOUNDLAND AND PEI	44,420	6,253 (14.1)	5,370 (12.1)	3,382 (7.6)	4,372 (9.8)
NOVA SCOTIA	43,979	5,613 (12.8)	4,845 (11.0)	3,508 (7.9)	3,771 (8.6)
NEW BRUNSWICK	39,846	5,079 (12.7)	3,841 (9.6)	2,632 (6.6)	3,039 (7.6)
QUEBEC	471,326	49,079 (10.4)	25,632 (5.4)	6,093 (1.3)	32,612 (6.9)
ONTARIO	458,597	57,134 (12.5)	42,268 (9.2)	20,447 (4.5)	39,171 (8.5)
MANITOBA	54,952	6,964 (12.6)	5,160 (9.4)	3,363 (6.1)	5,336 (9.7)
SASKATCHEWAN	44,020	9,533 (21.7)	7,794 (17.7)	4,023 (9.1)	3,419 (7.8)
ALBERTA	186,832	33,265 (17.8)	26,538 (14.2)	14,692 (7.9)	18,739 (10.0)
BRITISH COLUMBIA	243,829	38,742 (15.9)	27,848 (11.4)	10,771 (4.4)	26,651 (10.9)
CANADA	1,587,801	211,662 (13.3)	149,296 (9.4)	68,911 (4.3)	137,110 (8.6)

SOURCE: Tabulations by the author from the Displaced Worker Survey micro data tape.

TABLE 6

Job Displacement in B.C. and Its Consequences by Level of Education

EDUCATION	PERCENT OF DISPLACED WORKERS	INCIDENCE OF DISPLACEMENT	DURATION OF JOBLESSNESS FOLLOWING DISPLACEMENT (WEEKS)	CURRENT LABOUR FORCE STATUS (PERCENT) EMP	UNEM	NLF	CURRENT UNEMPLOYMENT RATE
NONE OR ELEMENTARY SCHOOL	6.8	20	40.2	24	55	21	69.8
HIGH SCHOOL (COMPLETE OR INCOMPLETE)	56.9	22	30.4	43	38	19	47.0
SOME POST SECONDARY	16.6	31	25.1	55	27	17	33.1
POST SECONDARY	11.0	22	26.7	62	23	15	27.2
UNIVERSITY	8.7	12	19.4	65	24	11	27.3

Source: tabulations by the author from the Displaced Worker Survey micro data tape.

TABLE 7

Job Displacement in B.C. and Its Consequences by Industry of Lost Job

INDUSTRY OF LOST JOB	PERCENT OF DISPLACED WORKERS	INCIDENCE OF DISPLACEMENT	DURATION OF JOBLESSNESS FOLLOWING DISPLACEMENT (WEEKS)	CURRENT LABOUR FORCE STATUS (PERCENT) EMP	UNEM	NLF	CURRENT UNEMPLOYMENT RATE
Agriculture	1.7	33	30.6	22	28	50	55.4
Other Primary	6.7	28	25.7	36	49	15	57.6
Manufacturing	17.8	23	35.1	50	28	21	36.1
Construction	14.5	58	34.1	43	46	12	51.4
Transportation Communication and Utilities	5.9	11	22.9	50	37	13	42.9
Trade	20.5	27	25.5	57	27	16	32.0
Finance, Insurance and Real Estate	2.8	7	32.6	50	36	13	41.8
Services	28.4	20	23.2	45	35	20	44.0
Public Administration	1.8	6	27.7	54	29	16	35.1

Source: tabulations by the author from the Displaced Worker Survey micro data tape.

TABLE 8

Job Displacement in B.C. and Its Consequences by Occupation of Lost Job

OCCUPATION OF LOST JOB	PERCENT OF DISPLACED WORKERS	INCIDENCE OF DISPLACEMENT	DURATION OF JOBLESSNESS FOLLOWING DISPLACEMENT (WEEKS)	CURRENT LABOUR FORCE STATUS (PERCENT) EMP	UNEM	NLF	CURRENT UNEMPLOYMENT RATE
Managerial and Administration	7.1	15	31.6	63	30	6	32.4
Professional	11.4	14	18.7	55	29	16	35.0
Clerical	11.4	15	26.5	44	33	23	43.0
Sales	9.2	18	25.1	59	26	15	30.7
Services	13.0	22	22.4	38	40	22	51.5
Agriculture Forestry and Fishing	5.0	37	26.4	29	42	28	59.0
Mining	0.8	26	24.5	26	63	11	70.4
Processing	17.1	28	34.4	50	33	17	39.8
Construction	12.1	39	35.7	42	46	13	52.2
Transportation	5.8	25	29.9	44	35	21	43.8
Materials Handling	3.8	17	24.9	53	20	27	27.8

Source: tabulations by the author from the Displaced Worker Survey micro data tape.

TABLE 9

CHANGES IN INDUSTRY AND OCCUPATION FOLLOWING DISPLACEMENT IN BRITISH COLUMBIA

(a) CHANGES IN INDUSTRY OF EMPLOYMENT

INDUSTRY OF LOST JOB	CURRENT EMPLOYMENT STATUS (%) SAME INDUSTRY	DIFFERENT INDUSTRY	NOT EMPLOYED
Agriculture	14	9	78
Other Primary	13	24	64
Manufacturing	26	24	50
Construction	19	24	57
Transportation, Communication and Utilities	25	25	50
Trade	24	33	43
Finance Insurance and Real Estate	7	44	50
Services	30	15	55
Public Administration	17	38	46
ALL INDUSTRIES	24	24	52

(b) CHANGES IN OCCUPATION OF EMPLOYMENT

OCCUPATION OF LOST JOB	CURRENT EMPLOYMENT STATUS (%) SAME OCCUPATION	DIFFERENT OCCUPATION	NOT EMPLOYED
Managerial and Administrative	20	44	37
Professional	31	24	45
Clerical	21	23	56
Sales	27	32	41
Services	20	18	62
Agriculture Forestry and Fishing	13	17	71
Mining	0	26	74
Processing	25	26	50
Construction	19	23	58
Transportation	19	25	56
Materials Handling	13	40	47
ALL OCCUPATIONS	22	26	52